

use it, both boys and masters, are alike pleased. The schoolrooms are the best in the College as regards light and accommodation for teachers and taught, and offer a striking contrast to the dark and uncomfortable rooms which were built a few years ago for the Mathematical Masters.

Besides providing a home for the science-teaching, the Governing Body have also placed a grant of money at the disposal of the teachers for the purchase of microscopes, diagrams, maps, &c., so that a boy who is really anxious to learn has plenty of opportunities for so doing. The number is not very large at present, as so many other interests have to be considered, such as the classical work and the games. Those, however, who are really taking up science with a view to University honours, find their tutors less exacting about their classical studies; and that the time spent in the laboratory need not interfere with athletics is shown by the fact that the two boys who last year divided the Governing Body's prize for Biology are both distinguished football players. One of them was a prominent member of the school football eleven during the past winter, and has this year rowed for the fourth time in the Eton crew at Henley Regatta. His numerous official duties as "captain of the boats" during the last two years have not prevented his acquiring sufficient knowledge to gain him an entrance exhibition for Natural Science at Oxford, an honour which has only once before been gained by an Etonian.

In addition to the Chemical and Biological Laboratories Eton possesses a well-organised School of Practical Mechanics, consisting of a drawing-room, smithy, and shops for carpentry and metal-working, the whole being under the superintendence of a specially-qualified instructor. Much work is done here out of school-hours, oars, book-cases, cupboards, lathes, and a small steam-engine being some of the practical results of this institution, which is now completing the second year of its existence.

#### NOTES

THE death, on Sunday, is announced of Prof. Bruhns, the Director of Leipzig Observatory.

THE greatest activity prevails in the Palais de l'Industrie, preparing for the Exhibition of Electricity, but it is feared that, in spite of all efforts, the day of the formal opening will have to be postponed.

THE Municipal Council of Paris has finally granted to Siemens Brothers the authorisation to place rails in the streets for their electrical railway from the Place de la Concorde to the Exhibition. But no viaduct will be constructed, as formerly contemplated, and the rails will be merely laid flat on the pavement.

MR. MUNDELLA stated in the House of Commons the other day that Mr. Samuelson, M.P. for Banbury, and Mr. Slagg, M.P. for Manchester, had consented to investigate the whole question of technical education on the Continent at their own expense. Mr. Mundella was in communication with two other gentlemen, who, he hoped, would join the two mentioned.

A PUBLIC meeting will be held on August 8 at the Society of Arts for the purpose of re-organising the Trades Guild of Learning on a larger basis. Among the supporters of the movement is Sir John Lubbock.

A MEETING was held on Tuesday afternoon at Grosvenor House, Park Lane, to receive and consider a report from the Smoke Abatement Committee on the subject of an exhibition and trials of improved heating and smoke-preventing appliances, to be opened at South Kensington in October next. There was a numerous attendance. The exhibition in question will be held in the East and West Arcades and in buildings adjoining the

Royal Albert Hall; and gold, silver, and bronze medals, together with certificates of merit, will be awarded upon the report of a special committee. It will be opened on October 24 and closed on November 26. Dr. Siemens moved the first resolution, declaring that the present smoky condition of the atmosphere of London injuriously affects the health and happiness of the community, besides destroying public buildings, deteriorating perishable fabrics, and entailing in various ways unnecessary expenditure. The speech of Dr. Siemens was a powerful argument in support of the principles thus enunciated, and was warmly cheered. Sir Henry Thompson, in seconding the motion, pointed out that the admixture of unburnt fuel in the shape of smoke with the atmosphere must of necessity be prejudicial to those who had the misfortune to breathe it. He also showed by illustration how highly desirable it was on all grounds of health that the air should be perfectly free from smoke. Dr. Quain, Mr. Spencer Wells, and Mr. G. J. Romanes supported the proposition, which was carried unanimously. Other resolutions were carried, and it was resolved by the meeting to support the efforts now being made to reduce the evil arising from coal-smoke, and to assist in raising the funds necessary for constructing and carrying out, on a practical scale, the competitive testing of the various appliances to be shown, and for providing suitable prizes, medals, &c.

THE new building of the "Deutsche Seewarte" at Hamburg will be inaugurated on September 14. The Emperor William will be present, and will at the same time open a Marine Exhibition connected with the building.

THE annual meeting of the British Medical Association has been delayed a week beyond its usual time in consequence of the Medical Congress meeting in London. It will extend from the 9th till the 12th of August, and is to be held at Ryde, Isle of Wight. The address on medicine will be delivered by Dr. J. S. Bristow of St. Thomas's Hospital, that on surgery by Mr. Jonathan Hutchinson of the London Hospital, and that on obstetric medicine by Dr. J. Sinclair Coghill, visiting physician to the National Hospital for Consumption at Ventnor.

THE Harvard Geological Museum has lately received from the Smithsonian Institution a series of the types of the fossil plants described by Prof. Lesquereux in connection with his various Government publications. Prof. Lesquereux is also engaged in identifying a large collection of fossil plants made by Mr. Sternberg for the museum. The collection contains nearly all the species thus far described from the Cretaceous beds of Western Kansas.

AN exhibition and congress in connection with the culture of vines is appointed to take place in Milan in September next. The congress, which will be composed of experts from various countries, will be charged with the duty of inquiring into the subject of the disease which has of late years rendered the wine crop so uncertain. The exhibition will consist mainly of appliances for the application to vegetation of insect-destroying agencies, of machines and instruments for grafting, of photographs, plates, and printed publications relative to the vine disease, specimens of vine parasites, and numerous other objects serving similar purposes.

ACCORDING to the Mineral Statistics of Victoria for 1880 the quantity of gold raised in the Colony for the past year was 829,121 oz. 5 dwt., being upwards of 70,173 oz. more than in 1879. While there has been a decided increase in the quantity raised in alluvial mines, the main increase has been in the quartz mines, which have yielded 529,195 oz. The increase in alluvial mines is partly due to the opening-up of new gold-producing areas, and partly to the operations of the diamond drills recently imported.

AN interesting discovery has been made in one of the limestone quarries of Stromberg (Rhenish Prussia). In a small cave, such as occur frequently in the calcareous rock, the skeleton of a cave-bear was found. To judge from the thickness and length of the bones the animal must have measured at least 2½ or 3 metres in length and 2 metres in height. The teeth, of which sixteen were found, are of enormous size. Discoveries of this kind however are by no means rare in this neighbourhood, nor indeed in limestone caves generally.

AN earthquake shock was felt in Eastern France on the night of July 21-22 at Aix-les-Bains, Lyons, Grenoble, Chalons, and other places. The time of the phenomenon was 2h. 3s. a.m. at Lyons and Chalons, and the direction from north to south. No accident is reported in either of these places. The shock was also felt in Switzerland in a large number of places, at Geneva, Morges, Lausanne at about 2h. 45m. a.m. local time; indeed it is stated to have been the sharpest felt in the district since 1854. Nowhere has any accident been recorded. A terrible storm was raging in these regions on the 21st, a few hours before the earthquake took place. Spontaneous currents have interrupted also the telegraphic communications.

A SPECIAL library has been established by subscription in Paris for secular education. The subscribers have resolved to adopt a scientific creed, and to prescribe the use of fiction in books written for young people.

MR. RICHARD ANDERSON, the author of the well-known work on "Lightning Conductors," will contribute a short series of articles on "Thunderstorms: their History and Mystery," to the *St. James's Magazine*. The first article will appear in August.

M. BRUGGSCH, conservator of the Boulak Museum, has returned from Thebes with the contents of twenty sarcophagi recently discovered behind the ancient Palace of Queen Hatason. Amongst some 5000 antiquities which have been obtained the most remarkable are several mummies in a perfect state of preservation, and of considerable historical interest.

THE boring of the Arlberg tunnel is proceeding with great rapidity. The length finished since June, 1880, is 1720 metres, and an average yearly advance of 2160 metres is confidently expected after a while. The average of Mont Cenis and the St. Gothard was only 1112 and 1670 respectively. The St. Gothard tunnel will be completed by the end of September, but the lines of approach are not likely to be ready before next spring.

THE *Weserzeitung* reports that near the village of Rantrum a quantity of silver has been found buried about one foot deep in the ground. It consists of thirty-four small bars, six fragments of antique silver ornaments, and eight coins; the latter bear Arabic inscriptions, and may probably be dirhems of the Abassidic Caliph of Bagdad, who lived in the eighth century of the present era. The small bars were formerly used as money, and were weighed, before coins had any conventional value. Ornaments were frequently used in the same way. All the objects found were in a vase.

THE seventh Annual Exhibition held by the British Bee-keepers' Association was opened at the Horticultural Gardens on Tuesday, and will remain open till Monday next.

A REMARKABLE eruption was recently observed by the passengers of the ss. *Glenelg*, at the northern end of the Bay of Plenty, New Zealand. The water rose suddenly to a height of four feet, and spread over a circle of sixty feet in diameter, throwing up sand, shells, stones, and mud. The steamer was only about twenty yards outside the circle. The water continued boiling for some time.

THE *Italia Centrale*, a paper published at Reggio (Emilia) announces that the most remarkable mud-volcano of the province of Emilia, the Salsas di Querzola, has developed an extraordinary activity for a few days past, and has greatly frightened the neighbouring inhabitants. Loud subterranean noise was heard even in the plains around, incandescent lava was ejected to a height of several metres, and an earthquake was also noticed. Large numbers of tourists and curious inhabitants are proceeding to Regnano to witness the spectacle.

A REMARKABLE natural phenomenon is reported from Cs. Gorbo (Szolnok-Doboka Comitat, Hungary). On June 27 the Buznau Mountain, situated close to the village of Papelke, suddenly broke in two. The fissure measures 30 to 40 metres in breadth, 25 to 30 metres in depth, and 400 to 500 metres in length. Some of the houses in Papelke also show cracks, so that the whole seems to have been the effect of an earthquake. A landslip took place at the same time, and a field with an apple-tree in the middle of it has moved about 10 metres nearer to the village. Great excitement prevails in the neighbourhood.

VARIOUS antique bronze arms and implements, altogether weighing about four or five kilogrammes, have been found by forest labourers at a place called Friedhofstannen, in the district of Cattenbühl, near Oberode (Hanover). They were buried in the ground at a very slight depth. The objects consist of battle-axes, a sickle, a knife for taking off the hides of animals, a bracelet, rings. They are supposed to be of Celtic or Phoenician origin. In the neighbourhood of the spot where they were found there is an ancient earth-mound, dating from a very remote period, and inclosed by a circular pit of some 400 yards in circumference, the so-called ring or "kring." Above it was the Hessian frontier fortress of Friedeweh, below it the Spiegelburg.

THE tenth general meeting of the Saxo-Thuringian Apicultural Society will be held at Quedlinburg on July 31-August 2. An exhibition of living bees in hives, also of implements and products of bee-culture, will take place simultaneously.

WE have already received the Calendar of the Newcastle-on-Tyne College of Physical Science for 1881-82.

AN interesting paper on "Prehistoric Hackney" by Mr. J. E. Greenhill, read before the Hackney Natural History Society, has been printed in a separate form.

FROM the *Proceedings* of the Liverpool Naturalists' Field Club we learn that that society has reached its majority. There is the usual account of excursions and an address by the president, the Rev. H. H. Higgins, on "Animal Defences."

THE additions to the Zoological Society's Gardens during the past week include a Silver Fox (*Canis fulvus*, var. *argentata*) from Nova Scotia, presented by Mr. S. R. Platt; three Hedgehogs (*Erinaceus europaeus*), British, presented by Mr. W. Dunn, C.M.Z.S.; two Black-tailed Parrakeets (*Polytelis melanurus*) from New South Wales, presented by Mr. Gerald Arbuthnot; a Green Tree Frog (*Hyla arborea*), European, presented by Mrs. Humphrey; six Black and White Geese (*Anseranas melanoleuca*), seven Australian Wild Ducks (*Anas superciliosa*) from Australia, received in exchange. The following, amongst many other insects, may now be seen in the Insectarium:—Perfect specimens of the Swallow-tailed Butterfly (second brood from small larvae), Camberwell Beauty, Spurge Elephant and Privet Hawk-moths, Northern Brown Butterfly, Chalk-hill Blue Butterfly and Burnet Moth. There are also fine examples of the imago of the Atlas Moth, and larvae of this moth larger than any yet grown in England.

#### OUR ASTRONOMICAL COLUMN

ENCKE'S COMET.—The ephemeris of this comet for its approaching re-appearance was issued from Pulkowa last month; but unfortunately the editor of the *Astronomische*